



LD Biopharma, Inc.  
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## - PRODUCT DATA SHEET -

**Name of Product:** Recombinant Human UBE2J1 Protein  
**Catalog Number:** HRP-2835  
**Manufacturer:** LD Biopharma, Inc. USA

### Introduction

Human Ubiquitin-Conjugating Enzyme E2 J1 (**UBE2J1**) gene encodes a single transmembrane protein as one of E2 enzyme family members (located in ER) which catalyzes the covalent attachment of ubiquitin to other proteins. It functions in the selective degradation of misfolded membrane proteins from the endoplasmic reticulum (ERAD) and is essential for cells to recover from ER stress. It plays a role in MAPKAPK2-dependent translational control of TNF- $\alpha$  synthesis. UBE2J1 also acts as a platform for perinuclear positioning of the endosomal system by mediating ubiquitination of SQSTM1 through interaction with the E3 ubiquitin-protein ligase RNF26. It plays a role in male fecundity through the interaction with the E3 ubiquitin-protein ligase RNF133. During viral infection, UBE2J1 promotes Dengue virus RNA replication by negatively regulating IFN- $\beta$  signaling and mediating 'Lys-48'-linked ubiquitination on IRF3.

Full-length human UBE2J1 cytoplasmic domain cDNA (2 - 282aa) was constructed with codon optimization gene synthesis and expressed with a human N-terminal T7-His-TEV cleavage site Tag (31aa) fusion. This protein was expressed in *E. coli* as soluble one. The final product was purified using affinity column.

**Gene Symbol:** UBE2J1 (NCUBE1; CGI-76; HSPC153; HSPC205)  
**Accession Number:** NP\_057105  
**Species:** Human  
**Size:** 50  $\mu$ g / Vial  
**Composition:** 1.0 mg/ml, sterile filtered, in 20% Glycerol / PBS buffer.  
**Storage:** In Liquid. Keep at -80°C for long term storage. Product is stable at 4 °C for at least two weeks.

### Key References

Muthukumar Elangovan, et al., *The role of ubiquitin-conjugating enzyme Ube2j1 phosphorylation and its degradation by proteasome during*



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**endoplasmic stress recovery.** J Cell Commun Signal Sep;11(3):265-273. (2017).doi: 10.1007/s12079-017-0386-6.

Menon M.B. et al., **Endoplasmic reticulum-associated ubiquitin-conjugating enzyme Ube2j1 is a novel substrate of MK2 (MAPKAP kinase-2) involved in MK2-mediated TNFalpha production.** Biochem J. Dec 1;456(2):163-72. (2013).doi: 10.1042/BJ20130755.

Cremer T. et al., **The ER-embedded UBE2J1/RNF26 ubiquitylation complex exerts spatiotemporal control over the endolysosomal pathway.** Cell Rep. Jan 19;34(3):108659. (2021).doi: 10.1016/j.celrep.2020.108659.

## Applications

1. May be used for in vitro UBE2J1 mediated ER stress / E3 pathway regulation for various cells study using intracellular delivery of recombinant human UBE2J1 protein with protein delivery reagent such as ProFectin.
2. May be used for UBE2J1 protein-protein interaction assay.
3. May be used as specific E2 protein for ubiquitin related enzyme functional screening assays.
4. Potential therapeutic protein, which may be used for modulating ER stress related inflammation disease prevention or treatment.
5. As native human UBE2J1 immunogen for specific antibody production.

## Quality Control

Purity: > 92 % by SDS-PAGE.

## Recombinant Human UBE2J1 cytoplasmic Domain Protein Sequence (34.4 kD)

MASMTGGQOMGRGHHHHHENLYFQGGEFGSETRYNLKSPAVKRLMKEAAELKDPTDHYHAQPLEDNLFE  
WHFTVRGPPDSDFDGGVYHGRIVLPPEYPMKPPSIILLTANGRFVGGKICLSISGHPETWQPSWSIRT  
ALLAIIGFMPTKGEAIGSLDYTPERRALAKKSQDFCCEGCGSAMKDVLLPLKSGSDSSQADQEAKELA  
RQISFKAENVSSGKTISESDLNHSFSLTDLQDDIPTTFQGATASTSYGLQNSSAASFHQPTQPVAKNTSM  
SPRQRRQQQSQRRLSTSPDVIQGHQPRDNHT